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## **Final Technical Report - AASERT Award**

F49620-92-J-0073

May, 1992 - April, 1995

### **Spectroscopy and Dynamics of Vibrationally Excited Molecules**

#### **Students Supported and Progress**

##### **Martin J. Coffey**

The AASERT award provide support for Marty during his first summer in graduate school and during a portion of his second year. The AASERT award also provided support for Marty during his third year in graduate school. During this time he completed the design and assembly of our new optical parametric oscillator and began initial characterization and testing. His grades remained good and he made normal progress toward his Ph.D.

##### **Mark D. Fritz**

The AASERT award provided partial support for Mark during his fifth year in graduate school. During this time he extended our collisional energy transfer studies, in collaboration with a post-doctoral associate, making measurements on relaxation in  $C_2H_2$  containing four quanta of vibrational excitation. He also performed our first vibrational overtone excitation experiments on formaldehyde, providing excellent spectroscopy data that have already motivated calculations by a post-doctoral associate. He completed his Ph.D., and his work has led to another manuscript on vibrationally excited molecules

##### **Donald E. Govoni**

The AASERT award provided a small amount of support for Don during his final year in graduate school. He helped develop transient grating techniques that we hope to apply to our AFOSR sponsored projects. His participation in the AFOSR sponsored work was a minor component of his graduate study. His grades are good and he is making normal progress toward his Ph.D.

### H. Laine Berghout

The AASERT award provided a small amount of support during his third year of graduate school. He contributed to computer interfacing and data analysis on the AFOSR sponsored project. His grades are good and he is making normal progress toward his Ph.D.

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